

# COUNTY FOREST COMPREHENSIVE LAND USE PLAN

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#### DESCRIPTION OF FOREST AND MANAGEMENT PLANNING

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## **300 DESCRIPTION OF FOREST**

### **300.1 COUNTY FOREST OWNERSHIP**

The County Forest is composed of 402 management compartments ranging in size from 115 acres to nearly 2310 acres. Within the County Forest Blocking Boundaries approximately 82 percent of the land is county owned with most of the remaining 18 percent in small private holdings. A map of these compartments can be found in the Appendix.

### **300.2 NATURAL FEATURES**

#### **300.2.1 Topography**

The Marinette County Forest, located in the northeast part of the state, lies primarily within the Northeast Sands physiographic region(s) of Wisconsin. The topography of the forest and surrounding area has glacial origin. The glaciers eroded hilltops and filled valleys, thus reducing relief. Elevations range from 1560 feet in the northwest part of the county forest to 600 feet in the southeast. The terrain ranges from steeply rolling in the northwest to flat in the southeast part of the forest.

#### **300.2.2 Geography**

Marinette County has a land area of approximately 895,584 acres, plus another 96,640 acres of water included in lakes and streams. Approximately 77 percent of the land in the county is classified as forest land. The County Forest contains approximately 230,000 acres and is the second largest County Forest in the State of Wisconsin.

Appendix 1000 contains maps showing the location of the County Forest.

#### **300.2.3 Geology and Soils**

The soils of Marinette County have been derived largely from the weathering of the glacial drift deposits and show a great variation within relatively short distances. Since the glacial period, the soils have been modified by water action, wind, and the accumulation and incorporation of organic material. Soil types on the County Forest range from sand in the southwest to northeast portions of the Forest to muck in the southeast to loamy soils in the

northwest. A generalized soil map can be found on [Marinette County Website](#). Detailed soils information is available from the USDA Web Soil Survey ([websoilsurvey.nrcs.usda.gov](http://websoilsurvey.nrcs.usda.gov)).

#### 300.2.4 Ecological Landscapes

Ecological Landscapes are regions in Wisconsin containing similar ecology and management opportunities. Each landscape can present unique management opportunities and challenges. These landscapes are essentially based on the National Hierarchical Framework of Ecological Units (NHFUE) (Cleland et al. 1997). More information on the 16 Ecological Landscapes defined within Wisconsin is available at: <https://dnr.wi.gov/topic/landscapes/index.asp?mode=Choose>

The Marinette County Forest lies within the Northeast Sands, Northern Lake Michigan Coastal and Northcentral Forest Ecological Landscape(s)

Northeast Sands - Found in northeast Wisconsin. Soils generally well drained sands or loamy sands with forest types dominated by pine, aspen-birch and oak. Typically ranging from the southwest to northeast part of the county forest.

Northern Lake Michigan Coastal – Found in northeast Wisconsin. Soils in this area generally peats and mucks with forest types dominated by maple-basswood, aspen-birch, spruce-fir, and swamp hardwoods. Typically located in the south east part of the county.

North Central Forest - Found across northern Wisconsin. Soils generally sandy loams, sands and silts with forest types dominated by northern mesic forest types such as northern hardwood, aspen-birch and spruce-fir. Typically found in the northwest part of the county.

#### 300.2.5 Vegetative Cover Types

Approximately eighty-eight (88) percent of the Marinette County Forest land base is forested, and approximately twelve (12) percent of the Marinette County Forest is non-forested. Forested uplands are comprised of primarily northern hardwood, aspen, oak, balsam fir, white pine and jack pine. Fir-spruce, swamp hardwoods, tamarack and cedar occupy the forested lowlands. Non-forested includes types such as open water, wetlands, rights-of-way, grass

openings, shrubs, bogs and gravel pits.

## FORESTED COMMUNITIES

The forested cover types are made up of a variety of size classes (*regeneration, sapling-pole, and saw timber*) and structure (*canopy, layers, ground vegetation, dead and downed material and inclusions*).

Forest cover types associated with the County Forest are:

Aspen - 49%. Consisting of primarily aspen species often found in combination with paper birch and red maple.

Northern Hardwoods - 11%. Consisting of a mixture of upland hardwood species including sugar maple, yellow birch, basswood, ash and red maple.

Hemlock - 1%. More than 50% hemlock associated with northern hardwood species.

Oak - 4%. Dominated by red oak, white oak, black oak and associated with other hardwoods.

Swamp Hardwoods - 6%. More than 50% swamp hardwood species including black ash, red maple, and elm.

Red Maple - 2%. More than 50% red maple. Often associated with aspen and white birch.

White Pine - 1%. More than 50% white pine. The vast majority of white pine stands are naturally occurring.

Red Pine - 7%. More than 50% red pine. Approximately 78% of the red pine acres are in plantations.

Jack Pine - 4%. More than 50% jack pine. Approximately 91% of the jack pine acres are in plantations.

Fir-Spruce - <1%. Consisting of swamp border or upland types with mixed species, predominately balsam fir and spruce associated with white pine, cedar, red maple, aspen, and birch. This is an old cover type and is being phased out as stands continually are updated. Eventually this type will be completely removed.

Balsam fir - <1%. Consisting of swamp border or upland types with 50% or more being balsam fir.

Miscellaneous Deciduous - <1%. Hardwood forests dominated by uncommon or exotic species. ie: box elder, honey locust, black locust, or Norway maple.

Miscellaneous Conifers - <1%. Conifer forests dominated by uncommon or exotic species. ie: Eastern Red Cedar, Scotch Pine, Norway spruce, European larch

Swamp Conifer - 1%. Lowland type typified by balsam fir, cedar, and spruce in combination with red maple and other lowland hardwoods.

Black spruce - 2%. More than 50% swamp conifer species with black spruce predominating.

White spruce - <1%. Upland type containing 50% or more of white spruce.

Tamarack - <1%. More than 50% swamp conifer species with tamarack predominating.

White cedar - 5%. More than 50% swamp conifer species with white cedar predominating.

Scrub oak - 6%. Consisting of a majority of poorer quality oak (often northern pin oak) capable of only fuelwood or cellulose fiber production.

Bottomland hardwoods - <1%. Typically floodplain species including silver maple, river birch, elm, cottonwood, and green ash.

White birch - 1%. Consisting of a majority white birch. Often found in combination with aspen and red maple.

## NON-FORESTED COMMUNITIES

Non-forested habitats are important components of management within the County Forest. Up-land and wetland non-forest types provide important habitat for distinct groups of species.

### Upland Non-Forest

Upland non-forest areas of the County Forest include:

Grass openings- consist of upland grasses such as brome, quack, bluegrass, timothy, big and little bluestem, and Indian grass.

Herbaceous vegetation- ground cover predominated by herbaceous species with bracken fern, sweet clover, giant ragweed, sting nettle, upland aster, goldenrod, and prairie dock being common.

Shrub opening- primarily upland site less than 10% stocked with tree species but having 50% or more of the area stocked with taller growing, persistent shrubs. This includes hazel, dogwood, junberry, sumac, alder, willow, and prickly ash.

Rock outcrops- include rocky talus and bedrock.

See Chapter 830 for detailed discussion on Biological Community Types.

## Wetlands

Wisconsin State Statutes define a wetland as “an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which has soil indicative of wet conditions.” Wetland communities are recognized to be a complex association of plants and animals, soils and water levels having special natural values. They provide many functional values including shoreline and flood protection, water quality protection, groundwater recharge, and animal and plant habitat. Therefore, it is the policy of Marinette County to preserve, protect, and manage wetlands under its jurisdiction in manner that recognizes the natural values of wetland and their importance on the environment. Scientists distinguish dozens of wetland types, characterized by vegetation, soil type and degree of saturation or water cover. Some of the more prominent types found on the County Forest include:

Aquatic bed- plants growing entirely on or in a water body no deeper than 6 feet. Plants may include pondweed, duckweed, lotus and water-lilies.

Marshes- characterized by standing water and dominated by cattails, bulrushes, pickerelweed, lake sedges and/or giant bur-reed.

Sedge or “wet” meadows- these wetlands more often than not have saturated soils rather than standing water. Sedges, grasses and reeds dominant, but may also have blue flag iris, marsh milkweed, sneezeweed, mint and several species of goldenrod and aster.

Scrub/shrub- these areas, which include bogs and alder thickets, are characterized by woody shrubs and small trees such as tag alder, bog birch, willow and dogwood.

Forested- these areas, include bogs and forested floodplain complexes, are characterized by trees 20 feet or more in height such as tamarack, white cedar, black spruce, elm, black ash, green ash and silver maple.

Forest management is conducted on many of the forested wetlands with activities occurring

primarily during frozen conditions. See Chapter 830 for detailed discussion on Biological Community Types.

#### 300.2.6 Fish and Wildlife

Wisconsin supports over 650 different types of mammals, birds, reptiles, amphibians and fish as well as millions of invertebrates. Management of county forest lands and the biotic communities they support provide a mix of habitat types and ages for a wide range of wildlife species. Each species, or interacting group of species, do best under different conditions. County forest lands provide a full range of habitats from open grasslands/barrens to mature forests, from bogs to forested wetlands, from spring ponds to lake shorelines. County forest staffs work closely with WDNR fish and wildlife managers and conservation organizations to identify and manage critical habitat for breeding, migrating and wintering fish and wildlife.

While the Marinette County Forest provides for a wide range of fish and wildlife species, current management strategies or programs have emphasized the following species and/or communities:

Kirtland's Warbler - Approximately 19,500 acres managed for young jack pine habitat to benefit Kirtland's Warblers which is a globally endangered species

Athelstane Barrens - Approximately 350 acres managed for barrens habitat that is beneficial to Golden Winged Warblers, woodcock, whip-poor-wills, and other bird, mammals, insects, and plants. This is a globally important habitat type.

Ruffed Grouse Management Area - Approximately 2,200 acres that is managed for habitat that will benefit ruffed grouse and woodcock.

Young Forest Initiative - Habitat management that will benefit a wide variety of songbirds. This ties directly in with the management being done already in our Kirtland's Warbler Management Area, the Ruffed Grouse Management Area, and Athelstane Barrens.



Pemebonwon River Trout Habitat Improvement – Approximately ¼ - mile stretch of river had work done to improve habitat for native trout species.

Red Shouldered Hawk Research Project – A graduate student thesis project that took an inventory Red Shouldered Hawk nests on the County Forest, monitored the nests and help create management strategies to incorporate into timber sales.

### 300.2.7 Rare and Endangered Resources

A review of the Natural Heritage Inventory (NHI) indicates the presence of a number of rare species, natural communities and unique natural features on the Marinette County Forest. All land disturbing projects will include an evaluation phase, to determine whether an NHI screening is required.

The Natural Heritage Inventory Database is the most comprehensive source of rare species data for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and review of public and private activities across the state, The NHI Portal is currently available to DNR staff and County Forest staff who hold a data sharing license.

The Wisconsin Historical Preservation Database is the most comprehensive source of cultural resources for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and review of public and private activities across the state, The Wisconsin Historical Preservation Database is currently available to DNR staff and County Forest staff.

### 300.2.8 Water

Marinette County has 16,495 acres involving 430 named lakes, 14 flowages and 924 miles of streams. Of this total, 625 miles are classified as trout streams.

Within the County Forest boundaries there is a variety of fishery resources. Approximately 46 named and 16 unnamed lakes have all or portions of their shoreline under county

ownership. In addition, the county owns frontage on over 50 named trout streams totaling over 50 miles. A complete inventory of the surface water resources in Marinette County can be found on the [Marinette County Website](#).

Marinette County also has 160 streams totaling 478 miles which are classified as Outstanding and Exceptional Resource Waters including:

- Peshtigo River
- Pike River
- Harvey Creek

*Note: An entire listing of the outstanding and exceptional resource waters can be found in Wisconsin Admin. Code NR102.10 and 102.11.*

### 300.3 CULTURAL FACTORS

#### 300.3.1 Economy

The importance of the County Forests to Wisconsin's economic health continues to rise. County Forests sustain over 60,000 full-time jobs derived from logging, trucking, paper production, manufactured building materials, and lumber. Many other jobs are created in such businesses as the expanding printing industry and are located far from the forested northland. County Forests contribute to the 24 billion dollar forest industry in Wisconsin.

In addition, the lands managed by these 30 counties provide an important recreation resource to complement our state's valuable tourism industry. Tourists spend valuable money at local businesses. By providing 2.4 million acres of public recreation land, we bring tourist to our state. As population increases and public access to privately owned forestland decreases, the need for accessible lands unquestionably will assume an ever more important role. More information on the economic impact of the County Forest program can be found at <https://www.wisconsincountyforests.com/>

Production of forest products and spin-off industries derived from the recreational opportunities on the Forest and the forest products it produces are vitally important to Marinette County's economic well-being. Forest industry is the #3 ranked employer in the

County. Tourism is ranked #1. This information can be found at the following link:  
<https://dnr.wi.gov/topic/forestbusinesses/factsheets.html>.

#### 300.3.2 Education and Research

Education and research continue to be critical components in making decisions that affect our natural resources. As public needs and demands of our forest and its products increase, we must be prepared to assure that sound decisions result. To this end, Marinette County encourages and supports research efforts that relate to the forest, and educational opportunities that will promote a better understanding of forest communities and management.

#### 300.4 OTHER PUBLIC LANDS OWNERSHIP

Marinette County Forest shares a common boundary with the State of Wisconsin, the Bureau of Public Lands Commission, Oconto County, Florence County and the USFS. Roads and trails are connected without interruption between the public lands providing for a more enjoyable experience for the user groups. Marinette County Forest will continue to form and build on these relationships with other adjacent public lands in the best interest of the public.